



Docket No.: 04995/132001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Kazuteru Adachi et al.

Patent No.: 7,224,072

Issued: May 29, 2007

For: MOUNTING STRUCTURE FOR BALL GRID
ARRAY TYPE IC

Certificate
JUL 30 2007
of Correction

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted a typographical error which should be corrected.

On the Cover page:

On the cover page of the patent, section (56), References Cited, U.S. Patent Documents, the following reference is erroneously missing: --5,870,286 2/1999 Butterbaugh et al. 361/704--.

The error was not in the application as filed by applicants; accordingly no fee is required.

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Patent No.: 7,224,072

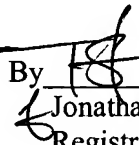
Docket No.: 04995/132001

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Also, enclosed is a copy of the cover page of the issued patent and a copy of the SB-08 form initialed by the examiner. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Applicants believe no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 04995/132001.

Dated: July 25, 2007

Respectfully submitted,

By  #45,079
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(12) **United States Patent**
Adachi et al.

(10) **Patent No.:** **US 7,224,072 B2**
(45) **Date of Patent:** **May 29, 2007**

(54) **MOUNTING STRUCTURE FOR BALL GRID ARRAY TYPE IC**

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2005/0040540 A1* 2/2005 Haba et al. 257/778

(75) Inventors: **Kazuteru Adachi**, Osaka (JP); **Shinji Yoshioka**, Osaka (JP)

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JP	2002-246512	8/2002

(73) Assignee: **Funai Electric Co., Ltd.**, Osaka (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 15 days.

OTHER PUBLICATIONS

Patent Abstracts of Japan for Publication No. 2002-246512 dated Aug. 30, 2002 (1 page).
JP Office Action dated Feb. 7, 2007 issued during the prosecution of JP patent application No. 2003-015142 (3 pages).

(21) Appl. No.: **10/761,738**

(22) Filed: **Jan. 21, 2004**

(65) **Prior Publication Data**

US 2004/0150974 A1 Aug. 5, 2004

(30) **Foreign Application Priority Data**

Jan. 23, 2003 (JP) P2003-015142

(Continued)

Primary Examiner—Nathan W. Ha

(74) *Attorney, Agent, or Firm*—Osha Liang LLP

(51) **Int. Cl.**
H01L 23/29 (2006.01)

(52) **U.S. Cl.** 257/778

(58) **Field of Classification Search** 257/778–780,
257/734–740, 697, 678
See application file for complete search history.

(56) **References Cited**

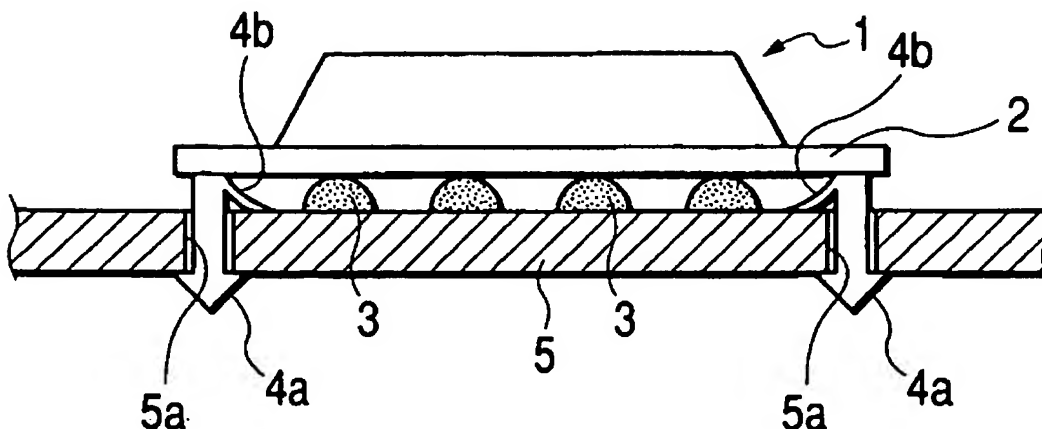
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(57) **ABSTRACT**

A mounting structure of a ball grid array type IC includes resin guide ribs provided on opposite sides of a body portion of the ball grid array type IC, engaging pawls formed at distal ends of the guide ribs so as to be locked into locking holes of a board, springs in which the guide ribs are inserted respectively, and height adjusting ribs provided at places slightly inwardly distant from the guide ribs respectively so as to protrude from the body portion. The springs prevent the ball grid array type IC from being strongly pressed against the board when the ball grid array type IC is mounted on the board. The height adjusting ribs adjust the ball grid array type IC to a predetermined height relative to the board.

2 Claims, 4 Drawing Sheets



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PTO/SB/08A/B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/761,738-Conf. #3634		
		Filing Date	January 21, 2004		
		First Named Inventor	Kazuteru Adachi		
		Art Unit	2814		
		Examiner Name	N. W. Ha		
Sheet	1	of	1	Attorney Docket Number	04995/132001

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
JB	AA*	US-5,870,286	02-09-1999	Butterbaugh et al.	

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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	BA	JP-09-129766	05-16-1997	Matsushita Electric Ind Co Ltd		
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	BC	JP-11-126800	05-11-1999	Formfactor Inc		
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	JP Office Action dated February 7, 2007 issued during the prosecution of JP patent application No. 2003-015142 (3 pages)	
	CB	English Translation of JP Office Action dated February 7, 2007 issued during the prosecution of JP patent application No. 2003-015142 (2 pages)	
	CC	Patent Abstracts of Japan, Publication No. 11-126800 dated May 11, 1999 (2 pages)	
	CD	Patent Abstracts of Japan, Publication No. 10-173107 dated June 26, 1998 (2 pages)	
	CE	Patent Abstracts of Japan, Publication No. 09-129766 dated May 16, 1997 (2 pages)	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	7/10/07
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**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,224,072
APPLICATION NO. : 10/761,738
ISSUE DATE : May 29, 2007
INVENTOR(S) : Kazuteru Adachi et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page:

Under section (56), References Cited, the following reference is erroneously missing: --5,870,286 2/1999 Butterbaugh et al. 361/704--.

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Application No. (if known): 10/763,788


Attorney Docket No.: 04995/132001

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